UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,595	12/17/2003	Vijay K. Arora	1410/77081	5884

48940 7590 09/15/2008

FITCH EVEN TABIN & FLANNERY
120 S. LASALLE STREET
SUITE 1600
CHICAGO, IL 60603-3406

EXAMINER	
THAKUR, VIREN A	
ART UNIT	PAPER NUMBER
1794	
MAIL DATE	DELIVERY MODE
09/15/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/736,595	ARORA ET AL.	
	Examiner	Art Unit	
	VIREN THAKUR	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,9-19 and 22-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-19 and 22-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1, 5-6,9-10, 13-14, 18-19,22-23, 25 and 27-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Polifka (US 2002/0027173 A1), and further in view of Moir (US 1766447) and Schytil (US 2857683), for the reasons given in the previous Office Action, mailed March 4, 2008.**

Claims 1 and 14 now recite that the compressed heated air is at a temperature within the range of about 375°F to about 425°F, which was noted previously in the rejection of now, cancelled claim 8.

4. Claim 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 5-6,9-10, 13-14, 18-19,22-23, 25 and 27-28, above in paragraph 3 and further in view of Pultinas, Jr (U.S. 4,591,508), for the reasons given in the previous Office Action, mailed March 4, 2008.

5. Claims 3, 4, 11, 16, 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 5-6,9-10, 13-14, 18-19,22-23, 25 and 27-28, above in paragraph 3, and further in view of Reeves et al. (U.S. 3,821,430) for the reasons given in the previous Office Action, mailed March 4, 2008.

6. Claims 2-4, 11, 12, 15-17, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 5-6,9-10, 13-14, 18-19,22-23, 25 and 27-28, above in paragraph 3, and in further view of Ruiz-Avila (WO 00/01256) for the reasons given in the previous Office Action, mailed March 4, 2008.

7. Claims 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 3, 4, 11, 16, 17 and 24, above in paragraph 6, and further in view of Eichner (U.S. 2004/0142078 A1) for the reasons given in the previous Office Action, mailed March 4, 2008.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. **Claims 1, 5, 6, 9 and 14 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1, 10, 11, 14 of copending Application No. 11/153435 in view of Polifka (US 2002/0027173 A1), Dantzig (US 2282708), Moir (US 1766447) and Schytil (US 2857683), for the reasons given in the previous Office Action, mailed March 4, 2008.**

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. **Claims 1, 5, 9, 10, 14 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, 11, 12 and 16 of copending Application No. 11/152387 in view of Polifka (US 2002/0027173 A1), Moir (US 1766447), Schytil (US 2857683) and Martin et al. (Elsevier) for the reasons given in the previous Office Action, mailed March 4, 2008.**

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11. **Claims 1, 5-7, 9, 10, 14 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 15-21 of copending Application No. 10/963746 in view of Polifka (US 2002/0027173 A1), Moir (US 1766447), Schytil (US 2857683) for the reasons given in the previous Office Action, mailed March 4, 2008.**

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

12. The declaration of Mr. Vitay K. Arora, filed June 4, 2008 has been considered but is not deemed persuasive.

13. The Declarant urges that the process of simultaneously roasting and grinding coffee beans would have not have been obvious to one of ordinary skill in the art, for the reasons listed below.

14. The declaration asserts that it has been well known in the art that, in conventional methods, coffee is prepared using the two separate critical steps of roasting the whole green beans to a desired roast color for flavor and aroma generation and grinding the whole beans into smaller size particles to accelerate release or extraction of coffee flavors, aromas and soluble solids during brewing.

This argument has been considered but is not deemed persuasive. It is noted, as discussed in the previous Office Action, mailed March 4, 2008, that the art teaches that it has been well known to simultaneously roast and grind coffee beans, as evidenced by the Moir reference. Although primarily directed to products other than coffee beans, such as gypsum, Moir nevertheless teaches the simultaneous heating and grinding of roasted and pulverized coffee berries (i.e. green coffee beans). As previously noted, the claim recites wherein "at least a portion of the green coffee beans are concurrently dried, roasted to induce pyrolysis and ground." Based on this limitation, the combined teachings of the prior art would still have resulted in at least a portion of coffee beans being simultaneously dried, roasted and ground. Therefore the art teaches that simultaneous heating and grinding of the coffee beans has already been performed.

15. The declaration further asserts that for centuries green coffee beans have been roasted whole beans to ensure desired flavor, aroma and color development. Roasting is a time temperature dependent process which result in several physical and chemical changes to the green coffee beans, including, removal of moisture, a rise in bean temperature, initiation of Maillard reactions and pyrolysis for flavor, aroma and CO_2 generation and density reduction. After this process, the roasted beans are sent for grinding.

This has been considered but is not deemed persuasive. Even if coffee beans were, for centuries, roasted as whole beans and then ground, it is noted that Moir still teach the concept of simultaneous roasting and grinding, and the prior art to Polifka teaches that if the ordinarily skilled artisan desired the minimizing of steps such as heating, drying and grinding, that agricultural and food products and plant products can be simultaneously heated, dried and ground using the process of Polifka. Simply because a particular method was used for centuries for achieving a particular product does not forego the fact other “non-conventional” methods have also been attempted, or would have been obvious to the ordinarily skilled artisan.

16. The declaration further asserts that attempts to first grind the whole green beans and then roast have been unsuccessful due to several factors including mechanical difficulties in the grinding and handling of green coffee beans due to their moisture content; the ground mush then becomes difficult to fluidize, which results in a brown mass with burnt specs due to non-uniform heat transfer in the roasting chamber and

lack of Maillard reactions necessary for flavor and aroma generation during roasting operations.

This argument has been considered but is not deemed persuasive. It is noted that the Declarant states that attempts to "first grind whole beans and then roast" have been unsuccessful due to the formation of a mush which cannot be fluidized. This is clearly different than the process taught by Polifka and Moir, for instance, who teach the simultaneous roasting and grinding of coffee beans. Even further, Polifka teaches that herbs, which also are moisture containing food product, can be ground into a fine powder, thus increasing their potency. Even if the simultaneous grinding and roasting could have resulted in an undesirable product, Declarant has not provided any substantiated evidence that this indeed would have occurred but rather is only speculating at this effect. Nevertheless, as noted above, declarant is asserting that grinding and then roasting has been attempted, and this is different from the simultaneous grinding and roasting, as taught by the art taken as a whole.

17. Furthermore, the declaration has not provided any substantiating evidence that it was surprising and unexpected to discover that the process of the invention overcomes the particularly mentioned problems, especially in light of the art taken as a whole that teaches the simultaneous roasting and grinding of coffee beans, as well as the teaching that a fluidized bed of a vortex configuration can also roast and grind coffee beans. The points of the declaration are further not persuasive since only a portion (i.e. any portion) of the coffee beans can undergo the claimed process.

18. On pages 9-10 of the response, Applicants urge that nowhere does Dantzig teach or suggest that green coffee beans may be introduced into an enclosure and entrained in a heated air spiraling downward through the enclosure while being concurrently dried, roasted and ground. It is noted, however, that Dantzig has merely been cited as further evidence of a step of simultaneous roasting and grinding. In any case, as noted above, the claims recite that "at least a portion of the green coffee beans are concurrently dried, roasted to induce pyrolysis and ground." Based on this limitation, the combined teachings of the prior art, to Polifka, Moir and Schytil would still have resulted in at least a portion of coffee beans being simultaneously dried, roasted and ground. Therefore the art still teaches that simultaneous heating and grinding of the coffee beans has already been performed.

19. On page 10 of the response Applicants further urge that Moir does not teach or suggest a process comprising introducing heated air at a temperature of about 375°F to about 425°F. It is noted however, that the particular temperature for roasting coffee beans would have been an obvious matter of routine determination, in light of the fact that the reference to Polifka teaches that this range can be attained and since Schytil teaches that the particular temperature results in the desired aroma, color and flavor. For instance, medium roasting can be achieved at a temperature of 220°C (column 3, lines 51-56), which is equivalent to 428°F, i.e about 425°F. In any case, Schytil also teaches that temperatures above 170°F can be used (column 3, line 65) and that the

particular roasting time depends on the temperature of the roasting gas and the grade desired. To therefore modify the combination and employ a particular roasting temperature would thus have been obvious to the ordinarily skilled artisan based on the desired flavor to be achieved.

20. The declaration further asserts that conventional methods using continuous roasters and whole green beans must **generally** be roasted at temperatures above 550°F and at least about 2 minutes. This is not persuasive since Schytil teaches roasting at less than 550°F for less than 2 minutes (column 3, lines 53-56) and even within declarant's claimed range, as discussed above. Also, applicants' arguments are not commensurate in scope with the claims. The time for roasting has not been claimed. Even if the particular time was claimed, the processing time would wholly have been dependent on the size and amount of green coffee beans, as well as the type of coffee beans, and therefore would have been an obvious matter of routine determination to the ordinarily skilled artisan for the purpose of achieving a desired result.

21. The declaration further asserts the unexpected result of darker roasted product with a molder flavor and less bitterness than conventionally prepared coffee products. This assertion of unexpected results is not convincing, especially since the prior art already teaches roasting coffee beans in a vortex type fluidized bed, and also using such a fluidized bed to grind the coffee as well and also specifically teaches the concept

of simultaneous roasting and grinding coffee beans. As such, the result of a milder flavor but darker roasted product would have appeared to have been expected since the combination of the prior art also teaches using a fluidized bed system for concurrently heating and grinding coffee beans.

22. On page 11 of the response, Applicants urge that Schytil teaches away from the process of the present invention by stating that a particular velocity is to be maintained. Schytil states that if the velocity is to low fluidization would not occur and if the velocity is too high, grinding will take place. It is noted that this is teaching has been relied on as further evidence that a high velocity air in a conical fluidized bed would result in grinding of coffee beans. Schytil does not directly state that the grinding results in an undesired product. Also, it should be noted that by teaching that an increased velocity results in grinding of the coffee beans, Schytil in essence, has also achieved applicant's process of simultaneous grinding and roasting of "at least a portion of the green coffee beans." In any case, however, the Polifka reference already teaches that an increased velocity in a fluidized bed would result in the comminuting and simultaneous roasting and drying of a food product. Schytil has been relied on to teach that this type of a system has effectively been achieved with coffee beans.

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIREN THAKUR whose telephone number is (571)272-6694. The examiner can normally be reached on Monday through Friday from 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571)272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. T./
Examiner, Art Unit 1794

/Steve Weinstein/
Primary Examiner, Art Unit 1794